

CLAIMS

We Claim:

1 1. A method of receiving information from a content provider and  
2 transmitting the information to a user terminal, comprising:  
3 receiving information from the content provider;  
4 displaying at least a portion of the information on the user terminal;  
5 monitoring the information from the content provider to determine if any of the  
6 portion of the information being displayed on the user terminal has changed;  
7 updating the information from the content provider that has changed; and  
8 transmitting the information from the content provider that has changed to the  
9 user terminal.

1 2. The method recited in claim 1, wherein the information comprises a  
2 plurality of real-time data values from the content provider.

1 3. The method recited in claim 2, wherein the updating of information from  
2 the content provider further comprises:  
3 accessing a hash table containing a plurality of prior real-time data values  
4 using a plurality of keys associated with the plurality of real-time data values;

5 determining whether the plurality of real-time data values received from  
6 content provider has changed from the prior plurality of real-time data values  
7 contained in the hash table; and

8 updating the prior plurality real-time data values contained in the hash table  
9 with the plurality of real-time values received from the content provider when the  
10 plurality of real-time data values received from content provider has changed from  
11 the plurality of prior real-time data values contained in the hash table.

1 4. The method recited in claim 3, wherein the transmitting of the plurality  
2 of real-time data values that have been updated in the hash table to the user  
3 terminal further comprises:

4 activating a data thread when a real-time data value of the plurality of prior  
5 real-time data values is updated in the hash table;

6 determining the position on a screen in the user terminal corresponding to the  
7 real-time data value;

8 transmitting the real-time data value to the user terminal; and

9 displaying the time real-time data value on the screen in the user terminal in  
10 the position indicated.

1 5. The method recited in claim 4, wherein the data thread is activated using  
2 remote method invocation.



1       **9.** The method recited in claim 8, comprising:  
2       retrieving the plurality of real-time data values on a periodic basis.

1       **10.** The method recited in claim 9, comprising:  
2       notifying data server thread when a real-time data value of the plurality of data  
3       that values has changed.

1       **11.** The method recited and claim 6, comprising:  
2       activating an embedded applet received from the data server thread in the  
3       user terminal;  
4       determining whether a page changed is required;  
5       informing to the data server thread of a plurality of new active keys;  
6       receiving the plurality of real-time data values from the data server thread; and  
7       updating the screen on the user terminal associated with each time data value  
8       of the plurality of real-time data values.

1       **12.** A computer program executable by computer and embodied on a  
2       computer readable medium for receiving a plurality of real-time data values from a  
3       content provider and transmitting the real-time data values to a user terminal,  
4       comprising:  
5       a user terminal code segment to receive real-time data values; and  
6       a real-time data server code segment to receive real-time data values from  
7       a content provider, determine if the real-time data values have changed from prior

8 real-time and transmit the real-time data values to the user terminal when the  
9 real-time data values have changed from the prior real-time data values.

1 13. The computer program recited in claim 12, wherein the real-time data  
2 server code segment further comprises:

3 a hash table storing the prior real-time data values and being updated when  
4 the real-time data values from the content provider have changed from the prior real  
5 -time data values.

1 14. The computer program recited in claim 13, wherein the real-time data  
2 server further comprises:

3 a web engine server module code segment to access a database having a  
4 portfolio generated by a user and generate an HTML page and applet, wherein upon  
5 receipt of a connection request from the user terminal the web engine server module  
6 code segment downloads the HTML page and applet to the user terminal code  
7 segment.

1 15. The computer program recited in claim 13, wherein the real-time data  
2 server further comprises:

3 a source filter server module code segment to receive real-time data values  
4 from a content provider and determine if the real-time data values have changed  
5 from prior real-time data values stored and table, and activate a data thread code



3 a web server module code segment to communicate to the user terminal code  
4 segment and retrieve a portfolio specified by the user terminal code segment from  
5 a database; and

6 a pagination engine module code segment, in communication with the web  
7 server module code segment, to create the HTML page and applet code segment  
8 based on the portfolio selected and the size of the screen on a user terminal.

1 20. A system to receive a plurality of real-time data values from a content  
2 provider and transmitting the real-time data values to a user terminal, comprising:

3 a user terminal to receive real-time data values; and

4 a real-time data server to receive real-time data values from a content  
5 provider, determine if the real-time data values have changed from prior real-time  
6 data values and transmit the real-time data values to the user terminal when the  
7 real-time data values have changed from the prior real-time data values.

1 21. The system recited in claim 20, wherein the real-time data server  
2 further comprises:

3 a hash table storing the prior real-time data values and being updated when  
4 the real-time data values from the content provider have changed from the prior real  
5 -time data values.

1 22. The system recited in claim 21, wherein the real-time data server further  
2 comprises:

3 a web engine server module to access a database having a portfolio  
4 generated by a user and generate an HTML page and applet, wherein upon receipt  
5 of a connection request from the user terminal the web engine server module  
6 downloads the HTML page and applet to the user terminal.

1 23. The system recited in claim 21, wherein the real-time data server further  
2 comprises:

3 a source filter server module to receive real-time data values from the content  
4 provider and determine if the real-time data values have changed from prior real-time  
5 data values stored and table, and activate a data thread when the real-time data  
6 values have changed from prior real-time data values.

1 24. The system recited in claim 23, wherein the real-time data server further  
2 comprises:

3 a real time data server module to communicate between the user terminal and  
4 the source filter server module through the data server thread.

1 25. The system recited in claim 24, where and source filter server module  
2 further comprises:

3 a source filter module to receive the real-time data values from the values  
4 content provider; and update hash table.



1 26. The system recited in claim 21, wherein the user terminal further  
2 comprises:  
3 a HTML page Java scripts to display a screen on the user terminal and; and  
4 an embedded applet to update the screen on the terminal when the time data  
5 values are received from the real-time data server.

1 27. The computer program recited in claim 22, wherein the web engine  
2 server module further comprises:  
3 a web server module to communicate to the user terminal and retrieve a  
4 portfolio specified by the user terminal from a database; and  
5 a pagination engine module, in communication with the web server module,  
6 to create the HTML page and applet based on the portfolio selected and the size of  
7 the screen on the user terminal.